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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/536,174	03/27/2000	Bernhard Raaf	GR 97 P 2586	3773

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EXAMINER

MEHRA, INDER P

ART UNIT	PAPER NUMBER
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2666

DATE MAILED: 07/29/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/536,174

Applicant(s)

RAAF, BERNHARD

Examiner

Inder P Mehra

Art Unit

2666

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on 23 March 2000.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-18 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-18 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 23 March 2000 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date <u>4</u> . | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

1. This is in response to application dated: 3/23/00

Specifications

2. The disclosure is objected to because of the following informalities:
 - a. Refer to, “eight time frames -----during the predetermined time frame” at page 5 lines 2-3. Time frames within frame is not what was defined earlier in the specification, refer to page 2 line 8 and page 4 line 21. If agreed, “eight time frames” should be “eight time slots”. It is confusing.

Appropriate correction is required.
 - b. Refer to page 3 line 6. “In order” should be “In order to”.

Appropriate correction is required.
 - c. Refer to page 3 line 8. “HSDSC”. This Acronym should be explained, as it is being used first time in the specification.

Appropriate correction is required.
 - d. Refer to page 5 line 7. “a second receiver” is used without explaining as to its location or context. It is not preceded by first receiver. What kind of receiver is it? Is it part of the mobile station 5 in fig. 1. If yes, there is shown only one receiver.

Appropriate correction/clarification is required.

Art Unit: 2666

e. Generally speaking, no where in the specification, is it explained as to the objective of “searching predetermined frequencies for data packets from adjacent base stations and to recognize the identity of the base stations”, refer to page 1 lines 23-26. What is objective in searching predetermined frequencies for data packets from adjacent base stations and to recognize the identity of the base stations?
Appropriate clarification is required.

f. Refer to page 8 lines 19-23. “the data packet transmitted by the given base station is transmitted once again *at least one of immediately before or immediately after the predetermined time frame during the predetermined time frame*”. It is confusing as to when the data packet is transmitted- **immediately before and after the predetermined time frame or during the predetermined time frame**
Appropriate clarification is required.

Drawings

3. The drawings are objected to under 37 CFR 1.83(a). The drawings must show every feature of the invention specified in the claims. Therefore, the limitations recited by claims 8 and 17 must be shown or the feature(s) canceled from the claim(s). No new matter should be entered.

Claims 8 and 17 recites the limitation "a channel equalization to be determined by having the first part of the synchronization data packet and the second part of the

Art Unit: 2666

synchronization data packet ----training sequence of the synchronization data packet"" in lines 2-

6. This limitation is not illustrated/supported by any drawing/figure.

Corrected drawing sheets are required in reply to the Office action to avoid abandonment of the application.

Claim Rejections - 35 USC § 112

4. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

5. Claims 1-18 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

a. Claim 1 recites the limitation "the improvement" in line 3. There is insufficient antecedent basis for this limitation in the claim.

b. Claim 1 recites the limitation "data packets", and "a mobile station" in line 6. There is insufficient antecedent basis for this limitation in the claim.

c. Claim 3 recites the limitation "a predetermined time frame" in line 4. There is insufficient antecedent basis for this limitation in the claim.

d. Claim 5 recites the limitation "the end" and the start in line 5. There is insufficient antecedent basis for this limitation in the claim.

e. Claim 6 recites the limitation "receiving the data packet with the mobile station" in lines 5-6. Should it not be "receiving the data packet by the mobile station?"

Art Unit: 2666

f. Claim 10 recites the limitation "said given base station" in lines 11-12 . There is insufficient antecedent basis for this limitation in the claim.

Claim Rejections - 35 USC § 103

6. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

7. Claims 1-2 and 10 -11 are rejected under 35 U.S.C. 103(a) as being unpatentable over **Raith et al** (US Patent No. 5,987,019, hereinafter, Raith, and further in view of **Paavonen** (US Patent No. 5,479,410).

For claims 1 and 10, Raith discloses, "a method for transmission of data packets between at least one base station and at least one mobile station in a mobile radio system, refer to col. 1 lines 10-15, the improvement which comprises:

- transmitting each of the data packets in time frames having a number of time slots, refer to col. 1 lines 50-col. 2 line 3;
- transmitting data packets from a mobile station in a plurality of successive time slots, refer to col. 1 lines 50-col. 2 line 3;
- transmitting at least one of control data packets and no data packets from a given base station to a mobile station, refer to col. 3 lines 37-40,

Art Unit: 2666

during a predetermined time frames while the mobile station is connected to the given base station, refer to col. 1 lines 54-57;

- during the time interval, switching the mobile station ----- synchronization data packets

Raith does not disclose expressly, “respectively making available to the mobile station a time interval longer than a predetermined time frame for at least one of a receiving synchronization data packets and measuring signal levels of adjacent base station”,

Paavonen discloses, “respectively making available to the mobile station a time interval longer than a predetermined time frame for at least one of a receiving synchronization data packets and measuring signal levels of adjacent base station”, refer to abstract, col. 1 lines 9-11, col. 2 lines 34-40, col. 2 lines 54-56, and col. 5 lines 21-28.

It would have been obvious to a person of ordinary skill in the art at the time of the invention to use the capability of , “respectively making available to the mobile station a time interval longer than a predetermined time frame for at least one of a receiving synchronization data packets and measuring signal levels of adjacent base station. This capability can be implemented by combining the system as taught by Paaconen. The suggestion/motivation to do so would have been to facilitate possible handover.

8. Claims 2 and 11 are rejected under 35 U.S.C. 103(a) as being unpatentable over **Raith et al** (US Patent No. 5,987,019, hereinafter, Raith, and further in view of **Paavonen** (US Patent No. 5,479,410). furthjer in view of **Suzuki** (US Patent No. 5,995,515).

Art Unit: 2666

For claims 2 and 11, Raith and Paavonen disclose all the limitations of subject matter with the exception of the following limitation, which is disclosed by Suzuki, refer to col. 18 lines 16-31:

- “during the time interval, switching the mobile station to reception of at least one of synchronization data packets and measurement of signal levels of adjacent base station”, refer to Suzuki’s col. 18 lines 16-31.

It would have been obvious to a person of ordinary skill in the art at the time of the invention to use the capability of synchronization data packets and measurement of signal levels of adjacent base station, as taught by Suzuki. This capability can be implemented by combining the system as taught by Suzuki. The suggestion/motivation to do so would have been to facilitate possible handoff, refer to Suzuki’s col. 3 lines 61-65.

9. Claims 9 and 18 are rejected under 35 U.S.C. 103(a) as being unpatentable over **Raith et al**, hereinafter, Raith, and further in view of **Paavonen**, as in claims 1 and 10 above, and further in view of **Hamalainen** (US Patent No. 5,966,378).

For claims 2 and 11, Raith and Paavonen disclose all the limitations of subject matter with the exception of the following limitation, which is disclosed by Hamalainen, refer to col. 1 lines 5-10 and lines 34-38 and lines 54-65:

“transmitting data packets from a first mobile station and switching the first mobile station to receiving data packets at different times-----transmitting data packets in time slots during

Art Unit: 2666

which the first mobile station is switched to reception of data packets, refer to col. 1 lines 5-10 and lines 34-38 and lines 54-65 and abstract.

It would have been obvious to a person of ordinary skill in the art at the time of the invention to use the capability of transmitting data packets from a first mobile station and switching the first mobile station to receiving data packets at different times-----transmitting data packets in time slots during which the first mobile station is switched to reception of data packets. This capability can be implemented by combining the system as taught by Hamalainen. The suggestion/motivation to do so would have been to facilitate independent uplink and downlink transmission, refer to Hamialainen's col. 3 line 65-67.

Allowable Subject Matter

10. Claims 3-8 and 12-17 would be allowable if rewritten to overcome the rejection(s) under 35 U.S.C. 112, second paragraph, set forth in this Office action and to include all of the limitations of the base claim and any intervening claims.

11. The following is an examiner's statement of reasons for allowance:

The prior art does not teach or fairly suggest the limitations of the following claims : in combination with other limitations of claims:

“at least one of immediately before and immediately after a predetermined time frame is at least **partially not received by the mobile station**”, as taught by claims 3, and 12;

Art Unit: 2666

“at least one of immediately before and immediately after a predetermined time frame **on at least one of the end and the start of the predetermined time frame**”, as taught by claims 5, and 14;

“at least one of immediately before and immediately after a predetermined time frame **during the predetermined time frame, and receiving the data packet with the mobile station**”, as taught by claims 6, and 15;

“**choosing a length of the time interval during which the mobile station is switched -- ---such that the mobile station can receive a first part of a synchronization data packet in a first time interval, and can receive a second part of a synchronization data packet in a second time interval**”, as taught by claims 7 and 16;

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled “Comments on Statement of Reasons for Allowance.”

Prior Art

12. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

- **Haartsen** (US Patent No. 6,028,853) discloses for synchronizing a multiple of radio transceiver arrangement.

Art Unit: 2666


- **Toy et al** (US Patent No. 5,177,740) discloses frame /slot synchronization to a received TDMA signal and a temporal position of a reference feature.
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Conclusion

13. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Inder P Mehra whose telephone number is 703-305-1985. The examiner can normally be reached on 8AM to 5PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Seema Rao can be reached on 703-308-5463. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).


Inder P Mehra
Examiner
Art Unit 2666


DANG TON
PRIMARY EXAMINER